

# NOMENCLATURAL CHANGES AND INNOVATIONS IN *Panicum* AND *Dichanthelium* (POACEAE: PANICEAE)

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## ABSTRACT

Infrageneric taxa in *Panicum* and *Dichanthelium* have a long history of usage, but at least eight of these taxa have not been validly published previously. The new taxa published here are *Panicum* sect. *Antidotalia*, *P.* sect. *Hemitoma*, *Dichanthelium* sect. *Clandestina*, *D.* sect. *Linearifolia*, *D.* sect. *Macrocarpa*, *D.* sect. *Nudicaulia*, *D.* sect. *Pedicellata*, and *D.* sect. *Strigosa*. Fifty-two new combinations, made for a forthcoming treatment of these two genera, are as follows: *D.* sect. *Angustifolia*; *D.* sect. *Ensifolia*; *D.* sect. *Lancearia*; *D.* sect. *Lanuginosa*; *D.* sect. *Oligosantha*; *D.* sect. *Sphaerocarpa*; *D. aciculare* subsp. *angustifolium*, subsp. *fusiforme*, subsp. *neuranthum*; *D. acuminatum* subsp. *columbianum*, subsp. *fasciculatum*, subsp. *implicatum*, subsp. *leucothrix*, subsp. *lindheimeri*, subsp. *longiligulatum*, subsp. *sericeum*, subsp. *spretum*, subsp. *thermale*; *D. chamaelonche* and subsp. *breve*; *D. commutatum* subsp. *ashei*, subsp. *equilaterale*, subsp. *joori*; *D. dichotomum* subsp. *lucidum*, subsp. *mattamuskeetense*, subsp. *microcarpon*, subsp. *nitidum*, subsp. *roanokense*, subsp. *yadkinense*; *D. ensifolium* subsp. *curtifolium*; *D. oligosanthos* subsp. *scribnerianum*; *D. ovale* subsp. *praecocius*, subsp. *pseudopubescens*, subsp. *villosissimum*; *D. portoricense* subsp. *patulum*; *D. strigosum* subsp. *glabrescens*, subsp. *leucoblepharis*; *D. tenue*; *P. amarum* subsp. *amarulum*; *P. anceps* subsp. *rhizomatum*; *P. capillare* subsp. *hilmannii*; *P. dichotomiflorum* subsp. *bartowense*, subsp. *puritanorum*; *P. hallii* subsp. *filipes*; *P. hirticaule* subsp. *sonorum*, subsp. *stramineum*; *P. philadelphicum* subsp. *gattingeri*, subsp. *lithophilum*; and *P. rigidulum* subsp. *abscissum*, subsp. *combsii*, subsp. *elongatum*, subsp. *pubescens*.

## RESUMEN

Los táxones infragenéricos en *Panicum* y *Dichanthelium* han sido usados durante mucho tiempo, pero por lo menos ocho de estos táxones no han sido publicados válidamente. Los nuevos táxones aquí publicados son *Panicum* sect. *Antidotalia*, *P.* sect. *Hemitoma*, *Dichanthelium* sect. *Clandestina*, *D.* sect. *Linearifolia*, *D.* sect. *Macrocarpa*, *D.* sect. *Nudicaulia*, *D.* sect. *Pedicellata*, y *D.* sect. *Strigosa*. Cincuenta y dos nuevas combinaciones, designadas en un futuro tratamiento de estos dos géneros, son: *D.* sect. *Angustifolia*; *D.* sect. *Ensifolia*; *D.* sect. *Lancearia*; *D.* sect. *Lanuginosa*; *D.* sect. *Oligosantha*; *D.* sect. *Sphaerocarpa*; *D.* sect. *Angustifolia*; *D.* sect. *Ensifolia*; *D.* sect. *Lancearia*; *D.* sect. *Lanuginosa*; *D.* sect. *Oligosantha*; *D.* sect. *Sphaerocarpa*; *D. aciculare* subsp. *angustifolium*, subsp. *fusiforme*, subsp. *neuranthum*; *D. acuminatum* subsp. *columbianum*, subsp. *fasciculatum*, subsp. *implicatum*, subsp. *leucothrix*, subsp. *lindheimeri*, subsp. *longiligulatum*, subsp. *sericeum*, subsp. *spretum*, subsp. *thermale*; *D. chamaelonche* y subsp. *breve*; *D. commutatum* subsp. *ashei*, subsp. *equilaterale*, subsp. *joori*; *D. dichotomum* subsp. *lucidum*, subsp. *mattamuskeetense*, subsp. *microcarpon*, subsp. *nitidum*, subsp. *roanokense*, subsp. *yadkinense*; *D. ensifolium* subsp. *curtifolium*; *D. oligosanthos* subsp. *scribnerianum*; *D. ovale* subsp. *praecocius*, subsp. *pseudopubescens*, subsp. *villosissimum*; *D. portoricense* subsp. *patulum*; *D. strigosum* subsp. *glabrescens*, subsp. *leucoblepharis*; *D. tenue*; *P. amarum* subsp. *amarulum*; *P. anceps* subsp. *rhizomatum*; *P. capillare* subsp. *hilmannii*; *P. dichotomiflorum* subsp. *bartowense*, subsp. *puritanorum*; *P. hallii* subsp. *filipes*; *P. hirticaule* subsp. *sonorum*, subsp. *stramineum*; *P. philadelphicum* subsp. *gattingeri*, subsp. *lithophilum*; y *P. rigidulum* subsp. *abscissum*, subsp. *combsii*, subsp. *elongatum*, subsp. *pubescens*.

In preparing the treatment of *Panicum* and *Dichanthelium* for Volume 25 of *The Flora of North America* (Barkworth et al. [eds.], in prep.), we find it necessary to describe eight new infrageneric taxa and make fifty-two new combinations. Editorial policy for this volume requires that infraspecific taxa be treated as subspecies rather than as varieties.

#### INFRAGENERIC NAMES

The genus *Panicum*, as recognized by Linnaeus (1753), included 20 species in two groups: *Spicata* and *Paniculata*. Most of these species have been transferred subsequently to other genera, including *Digitaria*, *Echinochloa*, *Oplismenus*, *Paspalum*, *Pennisetum*, and *Setaria*. The segregation of *Dichanthelium* from *Panicum* by Gould (1974) on characters of anatomy and photosynthetic pathways is supported by a recent molecular phylogeny of the Panicoideae (Giussani et al. 2001).

Bentham and Hooker (1883) treated *Panicum* as a relatively broad genus and published several infrageneric taxa. Nash (1903) treated *Panicum* in a narrower sense. He named and described nine unranked groups of *Panicum* in Small, *Flora of the Southeastern United States*. Even though no infrageneric rank was indicated, these names were validly and effectively published, and eight of these names can serve as basionyms in *Panicum* or *Dichanthelium*. Hitchcock revised the Gramineae for Robinson and Fernald (1908) in *Gray's Manual of Botany, ed. 7*. He divided *Panicum* in this treatment into two sections, the rank indicated by the double-s sign, which Robinson and Fernald define on p. 32 as indicating a section. He divided section *Eupanicum* into six unranked names, presumably subsections, and added 14 names, presumably series, within the "subsection" *Dichotoma*. Although these 20 infrasectional names are unranked, these names were also validly published and can also serve as basionyms.

Hitchcock and Chase (1910) added 13 additional unranked groups in *Panicum* and effectively published descriptions of these groups. Several subsequent taxonomists (e.g. Fernald 1936, 1938, 1947; Hsu 1965) have treated their group names as sectional or subsectional names. Hitchcock and Chase, however, explicitly stated (page 17) that they did not consider these groups to be formal taxonomic entities. They used the same group names in their later publications (Hitchcock 1913, 1915, 1935, 1951; Hitchcock and Chase 1915) but never suggested that they had changed their minds with respect to the taxonomic status of the groups. Article 34.1 of the *International Code of Botanical Nomenclature* (Greuter et al. 2000) states that a name is not validly published when it is not accepted by the author in the original publication. It seems likely that, had Hitchcock changed his mind regarding these group names, he or Chase would have included that information in one of their later publications for Hitchcock was a very active participant in the development of the nomenclatural code (Hitchcock 1919; Lawrence 1951) and hence must have been aware of the need

to make a clear statement of such a change of mind. Therefore, if the Hitchcock and Chase groups added in the 1910 paper are to be recognized as formal taxa, they must subsequently be validly published. We have indicated that we are deriving our section names from these group names in the 1910 paper by using "Hitchcock & Chase ex Freckmann & Lelong" for those groups which retain the Hitchcock and Chase group name and circumscription.

Pilger (1931) named new sections in *Panicum*, indicating these as "*nov. sect.*," meeting all requirements that apply to a 1931 publication. He also apparently published validly, but inadvertently, as sections two of the Hitchcock and Chase groups by reference to the Hitchcock and Chase names in the 1910 and 1915 papers, even though he did not indicate these as "*nov. sect.*"

Hsu (1965) is often cited as validating Hitchcock and Chase names or as publishing new combinations based on these names, but no types were cited, as required after 1 January 1958 by Article 37.1 of the Code. Gould (1974) raised subgenus *Dichanthelium* to a genus, making new combinations for 17 species and three varieties, but he did not treat subgenera or sections. Brown in Brown and Smith (1975) elevated two sections of *Panicum* to subgenus status in *Dichanthelium*. Zuloaga (1987) returned to a broader concept of *Panicum* and published four new sections, each with a Latin description and citation of a type. He also changed the status of three of Hitchcock's group names to sections, citing types and validly publishing these names.

#### NEW TAXA

***Panicum* sect. *Antidotalia*** Freckmann & Lelong, sect. nov. TYPUS: *Panicum antidotale* Retz.

Plantae perennes rhizomatibus crassis. Culmi erecti duri robusti, e nodis medius ramosi. Ligulae membranaceae ciliatae. Paniculae pyramidalis, plus minusve laxae, multiflorae, spiculis distincte pedicellatis. Spiculae ovoideae glabrae; gluma inferior circa dimidiam longitudinem spiculae attingens, 3-5 nervia; gluma superior et lemma inferior 7-nervia; anthoecium inferius staminiferis; anthoecium superius glabrum, nitidum.

Plants perennial, with thick rhizomes. Culms erect, robust, hard, branching at the middle nodes. Ligule a ciliate membrane. Panicle pyramidal, more or less lax, many-flowered, with spikelets on long pedicels. Spikelets ovoid, glabrous; first glume about 1/2 as long as the spikelet, 3- or 5-nerved; second glume and lower lemma 7-nerved; lower floret staminate; upper floret smooth, shiny.  $x = 9$ .

***Panicum* sect. *Hemitoma*** Hitchc. & Chase ex Freckmann & Lelong, sect. nov. TYPUS: *Panicum hemitomom* Schult.

Plantae perennes rhizomatibus, plus minusve aquaticae. Culmi erecti vel reclinati, saepe sterilis. Ligulae membranaceae, ciliatae vel laceratae. Paniculae angustae; rami pauci erecti spiciformes spiculis secundis subsesilibus. Spiculae anguste ovoideae vel lanceolatae lateraliter compressae, glabrae. Anthoecium inferius staminiferis; lemma superior tenuis, flexilibus, albida, involuta non nisi prope basin.

Plants perennial, semi-aquatic, with extensive rhizomes or stolons. Culms erect or sprawling, often sterile. Ligule a ciliate or lacerate membrane. Panicle narrow; branches few, spiciform, erect, with subsessile to short-pedicelled, secund spikelets. Spikelets narrowly ovoid to lanceolate, laterally compressed, glabrous. Lower floret staminate; upper lemma thin, flexible, whitish, rolled over the palea only near the base.

**Dichanthelium** sect. **Clandestina** Freckmann & Lelong, sect. nov. TYPUS: *Panicum clandestinum* L.

Plantae perennes rhizomatibus crassis vel caudicibus. Culmi 50–150 mm alti; culmi autumnali e nodis medius et superioribus ramosi, ramulosi, saepe fasciculos axillares formantes, paniculis clandestinis intra foliorum vaginas. Folia basilaria rosulam hiemalem formantes. Vagina tumida, maculata, papillosa-hispida vel pubescentia et viscida, ore constricta. Lamina basilaria grandis, ovata-lanceolata; laminae caulinae 6–14. Spiculae ellipsoideae vel ovoideae, acutae, 2.2–3.6 mm longa, nervis prominibus.

Plants perennial, from a thick rhizome or caudex. Culms 50–150 cm; autumnal culms with branches arising from the middle and upper nodes, rebranching and often forming dense axillary fascicles, the panicles enclosed in the sheaths. Basal leaves forming a winter rosette. Sheath usually swollen, mottled, papillose-hispid or pubescent and viscid, constricted at summit; basal blades large, ovate-lanceolate; cauline blades 6–14. Spikelets ellipsoid to ovoid, pointed, 2.2–3.6 mm long, with prominent veins.

**Dichanthelium** sect. **Linearifolia** Freckmann & Lelong, sect. nov. TYPUS: *Panicum linearifolium* Scribn. ex Nash.

Plantae perennes caespitosae. Culmi erecti vel effusi vel cernui; internodia inferna brevissima; internodia supera saepe manopere elongata. Culmi autumnali e nodis prope basin ramosi, paniculas condensatas minus quam 5 cm super terram vel culmos steriles formantes. Laminae basilares angustae, erectae vel ascendes, laminae caulinas infernas simulans; laminae superae plerumque erectae, rigidae, 1–5 mm latae, 15–60-plo longiora quam latiora. Spiculae ovoideae, ellipsoideae, vel obovoideae, 2.0–4.3 mm longa, glabrae vel pubescentae.

Plants perennial, tufted. Culms erect to spreading or drooping, the lower internodes very short, the upper 2–4 internodes often much elongated. Autumnal culms branching from the nodes near the base, producing condensed panicles within about 5 cm of the ground or sterile shoots. Basal blades narrow, erect or ascending, resembling the lower cauline ones; cauline blades usually erect, stiff, the upper ones 1–5 mm wide and 15–60 times as long. Spikelets ovoid, ellipsoid, or obovoid, 2.0–4.3 mm long, glabrous or pubescent.

Hitchcock and Chase (1910) used the group name “Depauperata” for most of the species in this section. However, because Pilger (1931) published section *Depauperata* for certain Old World species of *Panicum* and because *Dichanthelium* is often included in *Panicum*, we prefer to avoid creating a homonym if these genera are combined.

**Dichanthelium** sect. **Macrocarpa** Freckmann & Lelong, sect. nov. TYPUS: *Panicum macrocarpon* LeConte ex Torr.

Plantae perennes rhizomatibus brevibus vel caudicibus, raro rhizomatibus elongatibus. Culmi principales 20-110 cm alti, plus minusve erecti, sparse ramosi, fasciculos axillares densos non faciens; culmi secundarii interdum autumnali, parviores. Folia basilaria rosulam hiemalem formantes. Foliorum vaginae glabrae vel pubescentiae, non viscidae; laminae caulinae 3-7. Paniculae saltem partim exsertae. Anthoecium inferius saepe staminiferis.

Plants perennial, from a knotted rhizome, a caudex, or rarely an elongated rhizome. Main culms 20-110 cm, ascending to erect, sparsely rebranching, not producing dense axillary fascicles; additional culms (sometimes arising in autumn) smaller. Basal leaves forming a winter rosette. Sheaths glabrous or pubescent, not viscid; cauline blades 3-7. Panicle at least partly exserted. Lower floret often staminate.

Nash (1903) published the infrageneric name *Latifolia* within *Panicum*, indicating that this name was based on *Panicum latifolium* L. However, it is evident from his description ("much branched shrubs...outer [spikelet] scales woolly-tipped") that this name was based on a misapplication of *Panicum latifolium*, referring instead to *Panicum* (= *Lasiacis*) *divaricatum* L. According to Art. 7.4 of the Code a name is typified by the type of the basionym, even though it may have been applied to a taxon now considered not to include that type. However, in the case of an unranked infrageneric name, a modern author may publish a new name at a definite rank. We prefer to avoid confusion over the application of *Latifolia* by basing this section name on a different type.

**Dichanthelium** sect. **Nudicaulia** Hitchcock & Chase ex Freckmann & Lelong, sect. nov. TYPUS: *Panicum nudicaule* Vasey.

Plantae perennes caespitosae. Culmi 20-60 cm alti, inferme ascendes, glabri; culmi autumnale e nodis prope basin ramosi. Laminae planae vel rigide involutae, ascendes, basi aggregatae, superiores multum redactae. Folia basilaria rosulam hiemalem formantes. Panicula longa-exserta, pauciflora. Spiculae anguste ellipsoideae, 2.4-2.9 mm longa, glabrae.

Plants perennial, tufted. Culms 20-60 cm, weakly ascending, glabrous; autumnal culms branching from the base. Blades flat to stiffly involute, ascending, crowded at the base, the uppermost ones much reduced. Basal leaves not forming a distinct winter rosette. Panicle long-exserted, few-flowered. Spikelets narrowly ellipsoid, 2.4-2.9 mm long, glabrous.

**Dichanthelium** sect. **Pedicellata** Hitchc. & Chase ex Freckmann & Lelong, sect. nov. TYPUS: *Panicum pedicellatum* Vasey.

Plantae perennes basibus duris cormiformibus et rhizomatibus gangliiformibus. Culmi erecti vel effusi; culmi autumnali divaricate ramosi ante maturitem paniculae ad finem decumbes. Folia basilaria rosula hiemalem non formantes. Ligulae membranaceae ciliatae. Laminae papillatae ciliatae. Spiculae obovoideae vel obpyriformes, 3.2-4.4 mm longa, papillatae pubescentiae, basi attenuatae. Anthoecium superius ad apicem puberulum, acutum vel attenuatum.

Plants perennial, from a hard, corm-like base and a knotted rhizome. Culms

erect or spreading; autumnal culms freely divaricate-branching before the primary panicle matures, ultimately decumbent. Basal leaves not forming a winter rosette. Ligule a ciliate membrane. Blades papillose-ciliate. Spikelets obovoid to obpyriform, 3.2–4.4 mm long, papillose-pubescent, attenuate at the base. Upper floret pointed to attenuate, puberulent at the apex.

**Dichanthelium** sect. **Strigosa** Freckmann & Lelong, sect. nov. TYPUS: *Panicum strigosum* Muhl. in Elliott.

Plantae perennes dense caespitosae. Culmi principales graciles; internodia inferna breves; 3–5 internodia supera elongata. Culmi autumnali pulvinum densum formantes. Laminae molles pallidovirens vel flavovirens, plerumque marginibus ciliatis. Laminae basilares grandes laminas caulinas infernas simulans. Spiculae late ellipsoideae vel obovoideae, 1.1–2.3 mm longa, glabrae vel pubescentiae.

Plants perennial, densely tufted. Main culms slender, the lower internodes short, the upper 3–5 internodes elongated. Autumnal culms forming a dense cushion. Blades soft, pale green or yellowish, usually with ciliate margins. Basal blades large, scarcely separable from the lower cauline blades. Spikelets broadly ellipsoid to obovoid, 1.1–2.3 mm long, glabrous to pubescent.

Bentham and Hooker (1883) created the section *Laxiflora* to include certain Old World species of their subgenus *Eupanicum*, but not including *P. laxiflorum* Lam. To avoid creating a later homonym if *Dichanthelium* is treated as part of *Panicum*, we are basing the section name on *Panicum strigosum* Muhl. in Elliott, rather than *P. laxiflorum*.

#### NEW COMBINATIONS

**Dichanthelium** sect. **Angustifolia** (Hitchc. in B.L. Rob. & Fernald) Freckmann & Lelong, stat. nov. BASIONYM: *Panicum* (unranked) *Angustifolia* Hitchc. in B.L. Rob. & Fernald, Gray's Man. Bot. Ed. 7:106. 1908. TYPE: *Panicum angustifolium* Elliott.

**Dichanthelium** sect. **Ensifolia** (Hitchc. in B.L. Rob. & Fernald) Freckmann & Lelong, stat. nov. BASIONYM: *Panicum* (unranked) *Ensifolia* Hitchc. in B.L. Rob. & Fernald, Gray's Man. Bot, ed. 7:113. 1908. TYPE: *Panicum ensifolium* Baldwin ex Elliott.

**Dichanthelium** sect. **Lancearia** (Hitchc. in B.L. Rob. & Fernald) Freckmann & Lelong, stat. nov. BASIONYM: *Panicum* (unranked) *Lancearia* Hitchc. in B.L. Rob. & Fernald, Gray's Man. Bot, ed. 7:114. 1908. TYPE: *Panicum lancearium* Trin.

**Dichanthelium** sect. **Lanuginosa** (Hitchc. in B.L. Rob. & Fernald) Freckmann & Lelong, stat. nov. BASIONYM: *Panicum* (unranked) *Lanuginosa* Hitchc. in B.L. Rob. & Fernald, Gray's Man. Bot, ed. 7:109. 1908. TYPE: *Panicum lanuginosum* Elliott.

**Dichanthelium** sect. **Oligosantha** (Hitchc. in B.L. Rob. & Fernald) Freckmann & Lelong, stat. nov. BASIONYM: *Panicum* (unranked) *Oligosantha* Hitchc. in B.L. Rob. & Fernald, Gray's Man. Bot, ed. 7:114. 1908. TYPE: *Panicum oligosantes* Schult.

**Dichanthelium** sect. **Sphaerocarpa** (Hitchc. in B.L. Rob. & Fernald) Freckmann & Lelong, stat. nov. BASIONYM: *Panicum* (unranked) *Sphaerocarpa* Hitchc. in B.L. Rob. & Fernald, Gray's Man. Bot, ed. 7:113. 1908. TYPE: *Panicum sphaerocarpon* Elliott.

**Dichanthelium aciculare** subsp. **angustifolium** (Elliott) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum angustifolium* Elliott, Sketch Bot. S. Carolina & Ga. 1:129. 1816. *Panicum nitidum* var. *angustifolium* (Elliott) A. Gray, N. Amer. Gram. 2:112. 1835. *Chasea angustifolia* (Elliott) Nieuwl., Amer. Midl. Naturalist 2:64. 1911. *Dichanthelium angustifolium* (Elliott) Gould, Brittonia 26:59. 1974. *Panicum aciculare* var. *angustifolium* (Elliott) Wipff & S.D. Jones, Phytologia 77:457. 1994. TYPE: U.S.A. SOUTH CAROLINA: May, S. Elliott s.n. (HOLOTYPE: CHARL, fragment US!).

**Dichanthelium aciculare** subsp. **fusiforme** (Hitchc.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum fusiforme* Hitchc., Contr. U.S. Natl. Herb. 12:222. 1909. *Dichanthelium fusiforme* (Hitchc.) Harvill, Castanea 42:177. 1977. TYPE: CUBA: western Cuba, 1863, C. Wright 3454 (HOLOTYPE: GOET, fragment US!).

*Panicum neuranthum* var. *ramosum* Griseb., Cat. Pl. Cub. 232. 1866. *Dichanthelium aciculare* var. *ramosum* (Griseb.) Davidse, Novon 2:104. 1992.

**Dichanthelium aciculare** subsp. **neuranthum** (Griseb.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum neuranthum* Griseb., Cat. Pl. Cub. 232. 1866. TYPE: CUBA: eastern Cuba, 1860, C. Wright 3453 (HOLOTYPE: US 2209346!).

*Panicum pinetorum* Swallen, Proc. Biol. Soc. Wash. 55:93. 1942.

**Dichanthelium acuminatum** subsp. **columbianum** (Scribn.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum columbianum* Scribn., U.S.D.A. Div. Agrost. Bull. 7:78, f. 6. 1897. *Dichanthelium columbianum* (Scribn.) Freckmann, Phytologia 39:270. 1978. *Panicum acuminatum* var. *columbianum* (Scribn.) Lelong, Brittonia 36:270. 1984. TYPE: U.S.A. DISTRICT OF COLUMBIA: 14 Jul 1894 FL. Scribner s.n. (HOLOTYPE: US 743463!).

**Dichanthelium acuminatum** subsp. **fasciculatum** (Torr.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum dichotomum* var. *fasciculatum* Torr., Fl. North. & Mid. U. S. 1:145. 1824. *Panicum huachucae* var. *fasciculatum* (Torr.) F.T. Hubb., Rhodora 14:171. 1912. *Panicum lindheimeri* var. *fasciculatum* (Torr.) Fernald, Rhodora 23:228. 1921. *Panicum lanuginosum* var. *fasciculatum* (Torr.) Fernald, Rhodora 36:77. 1934. *Dichanthelium lanuginosum* var. *fasciculatum* (Torr.) Spellb. Madroño 23:145. 1975. *Dichanthelium acuminatum* var. *fasciculatum* (Torr.) Freckmann, Phytologia 48:108. 1981. *Panicum acuminatum* var. *fasciculatum* (Torr.) Lelong, Brittonia 36:269. 1984. TYPE: U.S.A. NEW JERSEY: sandy fields, J. Torrey s.n. (HOLOTYPE: NY!).

**Dichanthelium acuminatum** subsp. **implicatum** (Scribn. ex Nash) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum implicatum* Scribn. ex Nash in Britton & A. Br., Illust. Fl. 3:498, f. 267a. 1898. *Panicum unciphyllum* var. *implicatum* (Scribn. ex Nash) Scribn. & Merr., Rhodora 3:123. 1901. *Panicum lindheimeri* var. *implicatum* (Scribn. ex Nash) Fernald, Rhodora 23:228. 1921. *Panicum lanuginosum* var. *implicatum* (Scribn. ex Nash) Fernald, Rhodora 36:77. 1934. *Dichanthelium acuminatum* var. *implicatum* (Scribn. ex Nash) Gould & C.A. Clark, Ann. Missouri Bot. Gard. 65:1126. 1979 [imprint date 1978]. *Panicum acuminatum* var. *implicatum* (Scribn. ex Nash) Beetle, Phytologia 48:192. 1981. TYPE: U.S.A. MAINE: low marshy ground, Cape Elizabeth, 26 Jul 1895, FL. Scribner s.n. (HOLOTYPE: US 742896!).

**Dichanthelium acuminatum** subsp. **leucothrix** (Nash) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum leucothrix* Nash, Bull. Torrey Bot. Club 24:41. 1897. *Dichanthelium leucothrix* (Nash) Freckmann, Phytologia 48:101. 1981.

*Panicum acuminatum* var. *leucothrix* (Nash) Lelong, Brittonia 36:271. 1984. TYPE: U.S.A. FLORIDA: Lake Co.: low pineland at Eustis, 16-31 Jul 1894, G.V. Nash s.n. (HOLOTYPE: NY!).

***Dichanthelium acuminatum* subsp. *lindheimeri*** (Nash) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum lindheimeri* Nash, Bull. Torrey Bot. Club 24:196. 1897. *Panicum lanuginosum* var. *lindheimeri* (Nash) Fernald, Rhodora 36:77. 1934. *Dichanthelium lindheimeri* (Nash) Gould, Brittonia 26:60. 1974. *Dichanthelium lanuginosum* var. *lindheimeri* (Nash) Freckmann, Phytologia 39:270. 1978. *Dichanthelium acuminatum* var. *lindheimeri* (Nash) Gould & C.A. Clark, Ann. Missouri Bot. Gard. 65:1127. 1979 [imprint date 1978]. *Panicum acuminatum* var. *lindheimeri* (Nash) Beetle, Phytologia 48:193. 1981. *Panicum lindheimeri* var. *typicum* Fernald, Rhodora 23:227. 1921. TYPE: U.S.A. TEXAS: springs, banks of the Guadeloupe, near New Braunfels, 1846, F.J. Lindheimer 565 (HOLOTYPE: NY!).

***Dichanthelium acuminatum* subsp. *longiligulatum*** (Nash) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum longiligulatum* Nash, Bull. Torrey Bot. Club 26:574. 1899. *Dichanthelium acuminatum* var. *longiligulatum* (Nash) Gould & C.A. Clark, Ann. Missouri Bot. Gard. 65:1127-1128. 1979 [imprint date 1978]. *Dichanthelium longiligulatum* (Nash) Freckmann, Phytologia 48:102. 1981. *Panicum acuminatum* var. *longiligulatum* (Nash) Lelong, Brittonia 36:270. 1984. TYPE: U.S.A. FLORIDA: Apalachicola, 1892, G.R. Vasey (HOLOTYPE: NY!).

***Dichanthelium acuminatum* subsp. *sericeum*** (Schmoll) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum ferventicola* var. *sericeum* Schmoll, Madroño 5:92. 1939. *Dichanthelium lanuginosum* var. *sericeum* (Schmoll) Spellb., Madroño 23:150. 1975. *Dichanthelium acuminatum* var. *sericeum* (Schmoll) Freckmann, Phytologia 48:107. 1981. Type: U.S.A. WYOMING: Mammoth Hot Springs, Yellowstone National Park, in wet ground about hot springs, A. Nelson 6037 (HOLOTYPE: RM 20108).

***Dichanthelium acuminatum* subsp. *spretum*** (Schult.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum spretum* Schult., Mant. 2:248. 1824. *Dichanthelium spretum* (Schult.) Freckmann, Phytologia 48:102. 1981. TYPE: U.S.A. New England, moist ground, Muhlenberg's *Panicum* No. 37 (HOLOTYPE: PH).

***Dichanthelium acuminatum* subsp. *thermale*** (Bol.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum thermale* Bol., Proc. Calif. Acad. Sci. 2:181. 1862. *Dichanthelium lanuginosum* var. *thermale* (Bol.) Spellb., Madroño 23:151. 1975. *Dichanthelium acuminatum* var. *thermale* (Bol.) Freckmann, Phytologia 48:107. 1981. TYPE: U.S.A. CALIFORNIA. Sonoma Co.: northern part of Sonoma County, on hot rocks and in hot water flowing from Geyser Springs and Geyser Mountains, H.N. Bolander 3941 (HOLOTYPE: GH).

***Dichanthelium chamaelonche*** (Trin.) Freckmann & Lelong, comb. nov. BASIONYM: *Panicum chamaelonche* Trin., Gram. Panic. 242. 1826. TYPE: U.S.A. "AMER. BOR.": Enslin s.n. (HOLOTYPE: LE; fragment and photograph US!).

***Dichanthelium chamaelonche* subsp. *breve*** (Hitc. & Chase) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum breve* Hitc. & Chase, Contr. U.S. Natl. Herb. 15:271. 1910. *Dichanthelium dichotomum* var. *breve* (Hitc. & Chase) Gould & C.A. Clark, Ann. Missouri Bot. Gard. 65:1120. 1979 [imprint date 1978]. *Panicum chamaelonche* var. *breve* (Hitc. & Chase) Lelong, Brittonia 36:267.



1984. *Dichanthelium ensifolium* var. *breve* (Hitchc. & Chase) B.F. Hansen & Wunderlin, Ann. Missouri Bot. Gard. 75:1646. 1989 [imprint date 1988]. *Panicum ensifolium* var. *breve* (Hitchc. & Chase) Wipff & S.D. Jones, Phytologia 77:460. 1994. TYPE: U.S.A. FLORIDA: Jensen, low pine woods between scrub hills, among palmetto, 5 Apr 1906, A.S. Hitchcock 734 (HOLOTYPE: US 558435!).

***Dichanthelium commutatum* subsp. *ashei*** (G. Pearson ex Ashe) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum ashei* G. Pearson ex Ashe, J. Elisha Mitchell Sci. Soc. 15:35 (1898). *Panicum commutatum* var. *ashei* (G. Pearson ex Ashe) Fernald, Rhodora 36:83 (1934). TYPE: U.S.A. NEW YORK: Ithaca, Jul 1898, W.W. Ashe s.n. (LECTOTYPE [ISOTYPE] US!, [designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:301. 1910.]).

***Dichanthelium commutatum* subsp. *equilaterale*** (Scribn.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum equilaterale* Scribn., U.S.D.A. Div. Agrost. Bull. 11:42. 1898. TYPE: U.S.A. FLORIDA: Lake Co.: scrubby hammock lands, Eustis, 16-25 Aug 1894, G.V. Nash 1674 (LECTOTYPE: US 743929! [designated by Hitchcock & Chase, Contr. U.S. Natl. Herb. 15:310. 1910.]).

***Dichanthelium commutatum* subsp. *joori*** (Vasey) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum joori* Vasey, U.S.D.A. Div. Agrost. Bull. 8:31. 1889. TYPE: U.S.A. LOUISIANA: East Baton Rouge Par., near Baton Rouge, creek bank, in dense tufts, 1 Oct. 1885, J.F. Joor 39 (HOLOTYPE: US!). *Panicum divergens* Kunth in H.B.K. has been used by Zuloaga et al. (1993) to replace *P. commutatum*. However, Davidse & Zuloaga (2000) in proposing rejection of *P. divergens* note that the provenance of the type collection is uncertain and that the name had never been applied previously to *P. commutatum*.

***Dichanthelium dichotomum* subsp. *lucidum*** (Ashe) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum lucidum* Ashe, J. Elisha Mitchell Sci. Soc. 15:47. 1898. *Panicum dichotomum* var. *lucidum* (Ashe) Lelong, Brittonia 36:265. 1984. *Dichanthelium lucidum* (Ashe) LeBlond, Sida 19(4):831. 2001. TYPE: U.S.A. NORTH CAROLINA: deep shady swamps bordering Lake Mattamuskeet, 10 Jun-6 Jul 1898, W.W. Ashe s.n. (LECTOTYPE: fragment US! [designated by Hitchcock & Chase, Contr. U.S. Natl. Herb. 15:198. 1910.]).

***Dichanthelium dichotomum* subsp. *mattamuskeetense*** (Ashe) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum mattamuskeetense* Ashe, J. Elisha Mitchell Sci. Soc. 15:45. 1898. *Panicum dichotomum* var. *mattamuskeetense* (Ashe) Lelong, Brittonia 36:265. 1984. *Dichanthelium mattamuskeetense* (Ashe) LeBlond, Sida 19:832. 2001. TYPE: U.S.A. NORTH CAROLINA: around Lake Mattamuskeet, 10 Jun-6 Jul 1898, W.W. Ashe and G. Pearson s.n. (LECTOTYPE: US 2808955! [designated by Hitchcock & Chase, Contr. U.S. Natl. Herb. 15:186. 1910.]).

***Dichanthelium dichotomum* subsp. *microcarpon*** (Muhl. ex Elliott) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum microcarpon* Muhl. ex Elliott, Sketch Bot. S. Carolina 1:127. 1816. TYPE: U.S.A. GEORGIA, A.A. Baldwin s.n. (LECTOTYPE: CHARL [designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:181. 1910.]).

***Dichanthelium dichotomum* subsp. *nitidum*** (Lam.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum nitidum* Lam., Tabl. Encycl. 1:172. 1791. *Panicum dichotomum* var. *nitidum* (Lam.) Alph. Wood, Class-book bot., ed. s.n. [b], 786. 1861. *Dichanthelium dichotomum* var. *nitidum* (Lam.) LeBlond, Sida 19(4):829. 2001. TYPE: U.S.A. "CAROLINA": eastern Carolina, J. Fraser s.n. (HOLOTYPE: P, fragment US!).

**Dichanthelium dichotomum** subsp. **roanokense** (Ashe) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum roanokense* Ashe, J. Elisha Mitchell Sci. Soc. 15:44. 1898. *Panicum dichotomum* var. *roanokense* (Ashe) Lelong, Brittonia 36:265. 1984. *Dichanthelium dichotomum* var. *roanokense* (Ashe) LeBlond, Sida 19(4):831. 2001. TYPE: U.S.A. NORTH CAROLINA. Dare Co.: Manteo, Roanoke Island, dry soil, 10 Jun 1898, W.W. Ashe s.n. (LECTOTYPE: US! [designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:196. 1910]).

**Dichanthelium dichotomum** subsp. **yadkinense** (Ashe) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum yadkinense* Ashe, J. Elisha Mitchell Sci. Soc. 16:85. 1900. *Panicum dichotomum* var. *yadkinense* (Ashe) Lelong, Brittonia 36:266. 1984. *Dichanthelium yadkinense* (Ashe) Mohlenbr., Erigenia 6:27. 1985. TYPE: U.S.A. NORTH CAROLINA. Raleigh, May 1895, W.W. Ashe s.n. (LECTOTYPE: US 2808938! [designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:195. 1910]).

**Dichanthelium ensifolium** subsp. **curtifolium** (Nash) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum curtifolium* Nash, Bull. Torrey Bot. Club 26:569. 1899. *Panicum ensifolium* var. *curtifolium* (Nash) Lelong, Brittonia 36:266. 1984. TYPE: U.S.A. MISSISSIPPI. Ocean Springs, 2 May 1898, S.M. Tracy 4598 (HOLOTYPE: NY!).

**Dichanthelium oligosanthos** subsp. **scribnerianum** (Nash) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum scribnerianum* Nash, Bull. Torrey Bot. Club 22:421. 1895. *Panicum oligosanthos* var. *scribnerianum* (Nash) Fernald, Rhodora 36:80. 1934. *Dichanthelium oligosanthos* var. *scribnerianum* (Nash) Gould, Brittonia 26:60. 1974. TYPE: U.S.A. PENNSYLVANIA. Wysox, Jul 1836, J. Carey s.n. (LECTOTYPE: GH [designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:283. 1910]).

*Panicum scoparium* S. Watson in A. Gray, Man., ed. 6, 632. 1890., nec Lam. (1798), nec Rudge (1805), nec Elliott. (1816).

**Dichanthelium ovale** subsp. **praecocius** (Hitchc. & Chase) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum praecocius* Hitchc. & Chase, Rhodora 8:206. 1906. *Panicum lanuginosum* var. *praecocius* (Hitchc. & Chase) Dore in McNeill & Dore, Naturaliste Canad. 103:562. 1977. *Dichanthelium villosissimum* var. *praecocius* (Hitchc. & Chase) Freckmann, Phytologia 39:270. 1978. TYPE: U.S.A. ILLINOIS. Stark Co.: dry bank, near Wady Petra, 30 Jun 1900, V.H. Chase 649 (HOLOTYPE: US 558686!).

**Dichanthelium ovale** subsp. **pseudopubescens** (Nash) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum pseudopubescens* Nash, Bull. Torrey Bot. Club 26:577. 1899. *Panicum villosissimum* var. *pseudopubescens* (Nash) Fernald, Rhodora 36:79. 1934. *Panicum ovale* var. *pseudopubescens* (Nash) Lelong, Brittonia 36:271. 1984. TYPE: U.S.A. ALABAMA. Lee Co.: Auburn, 7 May 1898, F.S. Earle and C.F. Baker 1537 (HOLOTYPE: NY!).

**Dichanthelium ovale** subsp. **villosissimum** (Nash) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum villosissimum* Nash, Bull. Torrey Bot. Club 23:149. 1896. *Dichanthelium lanuginosum* var. *villosissimum* (Nash) Gould, Brittonia 26:60. 1974. *Dichanthelium villosissimum* (Nash) Freckmann, Phytologia 32:270. 1978. TYPE: U.S.A. GEORGIA. Ocmulgee River swamp, below Macon, 18–24 May 1895, J.K. Small s.n. (HOLOTYPE: NY!).

**Dichanthelium portoricense** subsp. **patulum** (Scribn. & Merr.) Freckmann & Lelong, comb. nov. BASIONYM: *Panicum nashianum* var. *patulum* Scribn. & Merr.,

U.S.D.A. Dept. Agrost. Circ. 27:9. 1900. *Panicum patulum* (Scribn. & Merr.) Hitchc., Rhodora 8:209. 1906. *Panicum lancearium* var. *patulum* (Scribn. & Merr.) Fernald, Rhodora 36:80. 1934. *Dichanthelium sabulorum* var. *patulum* (Scribn. & Merr.) Gould & C.A. Clark, Ann. Missouri Bot. Gard. 65:1113. 1979 [imprint date 1978]. TYPE: U.S.A. FLORIDA. Manatee Co.: Braidenton [Bradenton], 3 Sep 1898, R. Combs 1296 (HOLOTYPE: US 2808982!).

**Dichanthelium strigosum** subsp. **glabrescens** (Griseb.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum dichotomum* var. *glabrescens* Griseb., Fl. Brit. W.Indies 553. 1864. *Dichanthelium leucoblepharis* var. *glabrescens* (Griseb.) Gould & C.A. Clark, Ann. Missouri Bot. Gard. 65:1100 (1979) [imprint date 1978]. *Dichanthelium strigosum* var. *glabrescens* (Griseb.) Freckmann, Brittonia 33:457. 1981. *Panicum strigosum* var. *glabrescens* (Griseb.) Lelong, Brittonia 36:264. 1984. TYPE: JAMAICA: W. Purdie s.n. (HOLOTYPE: K).

**Dichanthelium strigosum** subsp. **leucoblepharis** (Trin.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum leucoblepharis* Trin., Clav. Agrost. 234. 1822. *Dichanthelium leucoblepharis* (Trin.) Gould & C.A. Clark, Ann. Missouri Bot. Gard. 65:1099. 1979 [imprint date 1978]. *Dichanthelium strigosum* var. *leucoblepharis* (Trin.) Freckmann, Brittonia 33:457. 1981. *Panicum strigosum* var. *leucoblepharis* (Trin.) Lelong, Brittonia 36:264. 1984. TYPE: U.S.A. NORTH CAROLINA, SOUTH CAROLINA, GEORGIA, LOUISIANA: Enslin s.n. (LECTOTYPE: LE, fragment US! [designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:162. 1910]).

**Dichanthelium tenue** (Muhl.) Freckmann & Lelong, comb. nov. BASIONYM: *Panicum tenue* Muhl., Descr. Gram. 118 (1817). *Dichanthelium dichotomum* var. *tenue* (Muhl.) Gould & C.A. Clark, Ann. Missouri Bot. Gard. 65:1119. 1979 [imprint date 1978]. TYPE: U.S.A.: Muhlenberg Herb. 192 (LECTOTYPE: PH-M [designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:259. 1910]).

**Panicum amarum** subsp. **amarulum** (Hitchc. & Chase) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum amarulum* Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:96. 1910. *Panicum amarum* var. *amarulum* (Hitchc. & Chase) P.G. Palmer, Brittonia 27:149. 1975. TYPE: U.S.A. VIRGINIA. Virginia Beach, 24 Sep 1900, T.A. Williams 3090 (HOLOTYPE: US 592748!).

**Panicum anceps** subsp. **rhizomatum** (Hitchc. & Chase) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum rhizomatum* Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:109, f. 104. 1910. *Panicum anceps* var. *rhizomatum* (Hitchc. & Chase) Fernald, Rhodora 36:73. 1934. TYPE: U.S.A. SOUTH CAROLINA: Orangeburg, 18 Aug 1905, A.S. Hitchcock 450 (HOLOTYPE: US 592752!).

**Panicum capillare** subsp. **hillmanii** (Chase) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum hillmanii* [as "hillmani"] Chase, J. Wash. Acad. Sci. 14:345. 1934. TYPE: U.S.A. TEXAS: Amarillo, plain, 11 Aug 1918, A.S. Hitchcock 16206 (HOLOTYPE: US 1037542!).

**Panicum dichotomiflorum** subsp. **bartowense** (Scribn. & Merr.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum bartowense* Scribn. & Merr., U.S.D.A. Dept. Agrost. Circ. 35:3. 1901. *Panicum dichotomiflorum* var. *bartowense* (Scribn. & Merr.) Fernald, Rhodora 38:387. 1938. TYPE: U.S.A. FLORIDA. Polk Co.: in wet reclaimed swamps at Bartow, 29 Sep 1898, R. Combs 1220 (HOLOTYPE: US 80538!).

**Panicum dichotomiflorum** subsp. **puritanorum** (Svenson) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum dichotomiflorum* var. *puritanorum*

Svenson, *Rhodora* 22:154, f. 1-5. 1920. TYPE: U.S.A. MAINE: dry sandy and gravelly beach, Half-way Pond, Barnstable, 13 Sep 1919, *M.L. Fernald* 306 (HOLOTYPE: GH).

***Panicum hallii* subsp. *filipes*** (Scribn.) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum filipes* Scribn. in A. Heller, *Contr. Herb. Franklin Marshall Coll.* 1:13. 1895. *Panicum hallii* var. *filipes* (Scribn.) F.R. Waller, *South W. Naturalist* 19:105. 1974. TYPE: U.S.A. TEXAS: growing in rich shaded ground in the upper part of the arroyo at Corpus Christi, alt. 30 feet, 31 May 1894, *A.A. Heller* 1809 (HOLOTYPE: US 2463136!).

***Panicum hirticaule* subsp. *sonorum*** (Vasey) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum sonorum* Vasey in Beal, *Grasses N. Amer.* 2:130. 1896. TYPE: MEXICO. SONORA: Lerdo, at the head of the Gulf of California, 1889, *E. Palmer* 947 (HOLOTYPE: US 2903025!).

*Panicum capillare* var. *miliaceum* Vasey in Vasey & Rose, *Contr. U.S. Natl. Herb.* 1:28. 1890. *Panicum hirticaule* var. *miliaceum* (Vasey) Beetle, *Phytologia* 47:383. 1981.

***Panicum hirticaule* subsp. *stramineum*** (Hitchc. & Chase) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum stramineum* Hitchc. & Chase, *Contr. U.S. Natl. Herb.* 15:67, f. 50. 1910. *Panicum capillare* var. *stramineum* (Hitchc. & Chase) Gould, *Madroño* 10:94. 1949. *Panicum hirticaule* var. *stramineum* (Hitchc. & Chase) Beetle, *Phytologia* 47:383. 1981. TYPE: MEXICO. SONORA: Guaymas, Jun-Nov 1887, *E. Palmer* 206 (HOLOTYPE: US 592753!).

***Panicum philadelphicum* subsp. *gattingeri*** (Nash) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum capillare* var. *gattingeri* Nash in Britt. & Brown, *Illustr. Fl.* 1:123. 1896. *Panicum gattingeri* Nash in Small, *Fl. s.e. U.S.* 92. 1903. TYPE: U.S.A. TENNESSEE: cedar glades near Nashville, Sep, *A. Gattinger* s.n. (LECTOTYPE: fragment US! [designated by Hitchc. & Chase, *Contr. U.S. Natl. Herb.*]).

*Panicum capillare* var. *campestre* Gattinger, *Tennessee fl.* 94. 1887.

***Panicum philadelphicum* subsp. *lithophilum*** (Swallen) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum lithophilum* Swallen, *Proc. Biol. Soc. Wash.* 54:43. 1941. TYPE: U.S.A. GEORGIA: on rocky slope, Stone Mountain, 23 Aug 1905, *A.S. Hitchcock and A. Chase* 185 (HOLOTYPE: US 952898!).

***Panicum rigidulum* subsp. *abscissum*** (Swallen) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum abscissum* Swallen, *J. Wash. Acad. Sci.* 30:215, f. 4. 1940. TYPE: U.S.A. FLORIDA: Sebring, in dry sand at tourist camp near lake, 3 Oct 1925, *P. Weatherwax* s.n. (HOLOTYPE: US 1259952!).

***Panicum rigidulum* subsp. *combsii*** (Scribn. & C.R. Ball) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum combsii* Scribn. & C.R. Ball, *U.S.D.A. Div. Agrost. Bull.* 24:42, f. 16. 1901 [imprint date 1900]. *Panicum longifolium* var. *combsii* (Scribn. & C.R. Ball) Fernald, *Rhodora* 36:69 (1934). *Panicum rigidulum* var. *combsii* (Scribn. & C.R. Ball) Lelong, *Brittonia* 36:263. 1984. TYPE: U.S.A. FLORIDA. Washington Co.: damp fertile flat woods [low pine barrens] at Chipley, 20 Aug 1898, *R. Combs* 583 (HOLOTYPE: US 80589!).

***Panicum rigidulum* subsp. *elongatum*** (Pursh) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum elongatum* Pursh, *Fl. Amer. Sept.* 1:69. 1813 [imprint date 1814], non Salisb. (1796). *Panicum agrostoides* var. *elongatum* (Pursh) Scribn., *Tennessee Agric. Exp. Sta. Bull.* 7:42. 1894. *Panicum rigidulum* var. *elongatum* (Pursh) Lelong,

Brittonia 36:263. 1984. TYPE: U.S.A. DELAWARE: *F.T. Pursh s.n.* (LECTOTYPE: K, photo US! [designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:104. 1910]).

*Panicum stipitatum* Nash in Scribn., U.S.D.A. Div. Agrost. Bull. 17 [rev. ed.]:56, f. 352. 1901.

***Panicum rigidulum* subsp. *pubescens*** (Vasey) Freckmann & Lelong, comb. & stat. nov. BASIONYM: *Panicum anceps* var. *pubescens* Vasey, U.S.D.A. Div. Bot. Bull. 8:37. 1889. *Panicum longifolium* var. *pubescens* (Vasey) Fernald, Rhodora 36:69. 1934. *Panicum rigidulum* var. *pubescens* (Vasey) Lelong, Brittonia 36:263. 1984. TYPE: U.S.A. ALABAMA: Mobile Co.: Mobile, *C.T. Mohr s.n.* (LECTOTYPE: US 80530! [designated by Hitchc. & Chase, Contr. U.S. Natl. Herb. 15:105. 1910]).

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